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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,886	12/13/2000	Urs Hoelzle	0026-0005	5678

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EXAMINER
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AMSBURY, WAYNE P

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/734,886

Applicant(s)

HOELZLE ET AL.

Examiner

Wayne Amsbury

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

CLAIMS 1-61 ARE PENDING

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**2. Applicant's arguments filed 4/19/05 have been fully considered but they are not persuasive.**

In page 1 of the response, applicant states:

***Applicants submit that the search object may or may not be dependent on or associated with the highlighted one or more groups of characters.***

Consequently, the search object could be *apples* when the highlighted one or more groups of characters (HGC) comprises *orange trees*. Using claim 1 as exemplary, a search **query** is generated from the HGC, but the search object plays no role other than being something that is contemporaneous with the HGC.

In the response, applicant refers to page 12 of the Specification to describe the search object, but that page does not contain this term. In fact, the Disclosure does not define or even contain the term *search object*. Page 12 actually describes how a search **query** can be determined using the HGC, but this leaves no role for a search **object**. Dependent claims 4-17 support the interpretation that what is described on page 12 is the derivation of a query, not an object distinct from the query. In terms of the example above, *orange AND trees*, *orange NEAR trees*, and "*orange trees*" are all possible search queries that can be derived from the phrase *orange trees* by common methods

or formulating search queries. This page provides no clue whatsoever as to what is meant by: “**selecting a search object while**” the HGC is in existence.

There is clearly a fundamental problem of nexus between the elements of these claims that has not been resolved by the response. The response has made it clear that it is the entirety of lines 6-7 of claim 1 that is involved in the ambiguity of the claims, and this rejection is maintained.

With respect to **prefetching** documents, this term is not explicitly defined in the Specification, and it is used in the general sense of fetching *prior to ... (some unspecified action)*. For example, any Web page displayed by a browser is fetched prior to its display, and thus is prefetched. In the case of Bharat, Web pages correspond to nodes, and the start set of such pages is selected prior to further processing. In particular, in the passage cited [COL 3 lines 17-20], a subset of the start set, “for example thirty, represented by the highest scoring nodes” refers to scores determined according to their connectivity [COL 3 lines 10-15].

Even a cursory reading of Bharat makes it clear that the intended purpose is to prune the result set of a Web search for presentation on the basis of relevance [COL 1 lines 14-54; COL 4 lines 20-22]. Furthermore, the start set is explicitly *fetched* [COL 4 line 67 and after] prior to extraction of the hyperlinks and other operations, and use of the connectivity is noted at the COL 3 lines 17-20 cited in order to prune the pages for further processing [COL 5 lines 26-37].

With respect to the elements of claims 28-29, they correspond to simply providing a prefetched document as in Bharat because providing a document located through a link inherently requires accessing the link, following the link to the document, and then retrieving it.

As to the arguments relating to clickthrough rates and the like, motivations were provided that fall well within the purview of one of ordinary skill in the art at the time of the invention for utilizing such techniques. Both Bharat and the Specification supply general background suggestions for these techniques. For example, at Col 1 lines 24-35 of Bharat, the need to determine relevance and usefulness in order to prune search results is set forth quite plainly. Measures such as clickthrough rate were well known and applied to provide such information at the time of the invention.

**3. Claims 25-33 and 37-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Bharat et al (Bharat), US 6,112,203, 29 August 2000.**

**This maintains the rejection of the previous rejection.**

Bharat teaches the invention essentially as claimed. In detail: Bharat identifies documents, typically web pages, that include one or more links, each corresponding to a linked document [COL 2 lines 59-67]. The links in the documents are analyzed and a score determined for each link [COL 3 lines 10-13]. A number of the linked documents are prefetched corresponding to a number of the links based on the determined scores [COL 3 lines 17-20].

In more detail, this process typically begins with an *index* of web pages, which in response to a user query generates a *result set* [COL 4 lines 9-29], which is intercepted and used to form a *start set* [COL 4 lines 30-33].

As to **claims 25 and 26**, the document containing links corresponds to the index of Web pages, or alternately a typical Web page. A subset of the start set is prefetched [COL 4 lines 33-44].

As to **claim 27**, the search engine index serves as a list of links, since Web page documents are identified by hyperlinks.

As to **claims 28-29**, Bharat provides for both selection of one of the prefetched documents [claim 28] and related documents [claim 29].

As to **claims 30-31**, the use of a URL inherently involves an address lookup.

As to **claim 32**, nothing in Bharat precludes prefetching all of the links in a Web page, since *subset* includes an entire set as a possibility.

As to **claim 33**, this claim describes the determination of hubs and authorities to which Bharat is directed [COL 4 lines 30-44 and elsewhere].

As to **claims 37-38**, Bharat is directed to determining similarity of documents with respect to the degree of match with a user query [COL 3 lines 22-30].

The elements of **claim 39-40 and 42-45** are rejected in the analysis above and this claim is rejected on that basis.

As to **claim 41**, Bharat uses a threshold to eliminate less desirable documents [ABSTRACT; Col 3 lines 28-29].

**4. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharat et al (Bharat), US 6,112,203, 29 August 2000.**

As to **claims 34, 35 and 36**, Bharat does not specify the use of either a clickthrough rate or a popularity to determine a score for linked documents. However, these were well known measures applied to web sites as noted in the Specification, page 17 line 15 to page 18 line 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply clickthrough and popularity to scoring documents such as web pages because these data are readily available and used to determine the usefulness of web sites.

**5. Claims 1-6 and 9-24 are rejected under 35 U.S.C. 112, second paragraph,** as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

There is no nexus between the search object selected "**while** the one or more groups of characters in the document are highlighted" [emphasis added] in the independent claims in this group. In particular, the selected search object is not stated to be one of, nor dependent on, nor associated with, the highlighted groups.

**6. Claims 1, 3-6, 20-33 and 37-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Kleinberg, US 6,112,202, 289 August 2000.**

Kleinberg is directed to searches of documents, typically linked Web pages using a Web browser [COL 2 lines 58-62; COL 4 lines 6-10].

As to **claims 20-24**, Kleinberg notes that words and phrases that serve as hyperlinks, both of which correspond to groups of characters in a document, are highlighted in Web pages as a matter of common practice [COL 2 line 62 to Col 3 line 4]. Further, a mouse click activates one of the hyperlinks and downloads the corresponding page. This corresponds to a simple search on the Web for the hyperlinked page, and in the system of Kleinberg, it initiates a search for other pages that are authoritative as to the content of interest [COL 4 lines 44-65]. As noted at COL 5 lines 20-41 and COL 12 lines 1-48, the embodiments of Kleinberg match those claimed.

The elements of **claims 1, 3-6, 25-33 and 37-45** are rejected in the analysis above and this claim is rejected on that basis.

**7. Claims 2, 7-19, 34-36 and 46-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinberg, US 6,112,202, 289 August 2000 in light of Liddy et al, US 5,963,940, 5 October 1999.**



Kleinberg does not explicitly identify words in a selected phrase and combine them to form a search query. However, as noted at COL 7 lines 21-37, the search may be initiated by any number of well-known ways from an initial page, including standard term-matching algorithms. **Official Notice** is taken that it was well known in the art at the time of the invention to apply Natural Language Processing [NLP] to determine queries. Evidence of this is provided by Liddy [DOL 4 lines 59-67]. **It would have been obvious** to one of ordinary skill in the art at the time of the invention to include the NLP processing of Liddy in Kleinberg in order to express and clarify complex queries determined by the content of a page and to retrieve and display relevant documents [Liddy COL 4 lines 43-52].

As to **claims 7-10 and 12-17**, the purview of Liddy includes the elements claimed, as noted above. As to **claim 2**, Liddy includes menus as generators of search requests [FIG 15 and elsewhere]. As to **claim 11**, Kleinberg applies a vector space model [COL 8 line 43 and after].

As to **claims 34, 35 and 36**, Kleinberg and Liddy do not specify the use of either a clickthrough rate or a popularity to determine a score for linked documents. However, these were well known measures applied to web sites as noted in the Specification, page 17 line 15 to page 18 line 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply clickthrough and popularity to scoring documents such as web pages because these data are readily available and used to determine the usefulness of web sites.

As to **claims 46-47**, selected subsets of a document or document corpus include identified pieces of information [Liddy COL 5 lines 1-15].

As to **claim 48**, names, such as those shown in Liddy FIG 15, are common elements of document phrases and are included in NLP analysis.


The elements of **claims 49-61** are rejected in the analysis above and these claims are rejected on that basis.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Amsbury whose telephone number is 571-272-4015. The examiner can normally be reached on M-F 6-18:30 FIRST WEEK.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPA

  
WAYNE AMSBURY  
PRIMARY PATENT EXAMINER